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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------|-------------|----------------------|---------------------|------------------|
| 10/562,331 | 12/23/2005 | Andreas Schilling | 1093-144 PCT/US | 5695 |
| 23869 | 7590 | 09/27/2006 | EXAMINER | |
| HOFFMANN & BARON, LLP | | | ASSAF, FAYEZ G | |
| 6900 JERICHO TURNPIKE | | | ART UNIT | |
| SYOSSET, NY 11791 | | | PAPER NUMBER | |
| | | | 2872 | |

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/562,331

Applicant(s)

SCHILLING ET AL.

Examiner

Fayez G. Assaf

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/23/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 9-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Muller (DE 10044465 A1).

Regarding claim 1, Muller discloses an optical security element (Fig. 1) having a substrate layer, wherein a first microstructure (6 of Fig. 5) for producing a first optically perceptible effect is shaped region-wise into the substrate layer in a surface region of the substrate layer, wherein the first microstructure (line 1 to line 1 to line 58 of Col. 9) is a diffraction structure, in particular a diffraction grating, a diffraction structure for producing a hologram or a matt structure, that the surface region is divided into microscopically fine pattern regions (such as 30 and 31 of Fig. 3) and a background region (area surrounding 2 in Fig. 1) and the first microstructure is shaped in the pattern regions (2 of

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Fig. 1) but not in the background region, that the microscopically fine pattern regions in the surface region (2; 5) are arranged in the form of a moiré pattern (see Fig. 5) into which a concealed item of information (12 of Fig. 1) which can be evaluated by means of an associated verification element is encoded as a security feature, wherein the moire pattern has at least one line grating with a plurality of lines (6 of Fig. 5) at a line spacing in the range of 40 to 200 μm (line 44 of Col. 2) and the line grating is phase-displaced in region-wise manner to produce the concealed information (12 of Fig. 5), and that the microscopically fine pattern regions are further substructured in accordance with a substructuring function (i.e. straight line) which describes a microscopic substructuring, which serves as a further security feature, of the moiré pattern and which encodes additional items of information in the surface region.

Regarding claims 2-3, Muller discloses the microstructure (6 of Fig. 5) being a first hologram or matt structure.

Regarding claim 9, Muller discloses the line grating having regions in which the lines of the line grating are curved (15 of Fig. 5).

Regarding claims 10 and 11, Muller discloses the moiré pattern comprising two-dimensional grating (see Fig. 5).

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Regarding claims 12-20, Muller discloses the average surface coverage of the moiré pattern produced by the grating is detectable by the human eye (the letter U in Fig. 5).

Regarding claim 21, Muller discloses the centroids of the pattern regions being phase-displaced in region-wise manner to produce the concealed information (i.e. due to over lapping of the patterns 6 and 13).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller.

Muller discloses the claimed invention except for an explicit teaching with regard to the reflecting surface being arranged in the background region or a second microstructure being formed by a diffraction structure for producing a second hologram/matt structure.

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However, such features are well known in security devices such as credit cards where the logo of the issuing bank being a reflective hologram.

It would have been obvious, at the time the invention was made, to a person having ordinary skill in the art to provide a reflective hologram onto the background area for added security.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kay et al. (US 6,903,850 B2)

Drinkwater (US 2005/0243391 A1)

Japanese reference (JP 2004-212927)

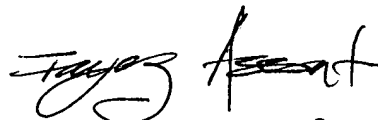
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fayez G. Assaf whose telephone number is (571) 272-2307. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Fayez G. Assaf
Primary Examiner
Art Unit 2872

9/16/2006